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AMENDMENTS TO THE CLAIMS

What is claimed as being new and desired to be protected by LETTERS PATENT of the United States is as follows:

1. (Currently Amended) A desiccant dehumidification system comprising:

a housing partitioned into a first and second air chamber each for passing air therethrough, each said air chamber having an inlet for intake of air and an outlet for exhausting air;

a rotating desiccant wheel positioned inside said housing and across said air chambers;

an air transmitting means positioned within said first air chamber for drawing return air from a structure into said first air chamber and passing said air across said desiccant wheel to remove moisture from said return air and exhausting into the structure as conditioned air;

an air transmitting means positioned within said second air chamber for drawing a source air into said second air chamber, across said desiccant wheel to remove moisture from said desiccant wheel and exhausting from said second air chamber;

an air heating means positioned in said second air chamber upstream of said desiccant wheel for heating said source air to be passed over said desiccant wheel; and

a conduit ~~in operational connection~~ being operationally connectable between said air transmitting means in said first air chamber and said air heating means for passing pressurized return

air to said air heating means, said conduit also being operationally connectable between said air transmitting means in said second air chamber and said air heating means for passing pressurized source air to said air heating means.

2 - 9. (Canceled)

10. (Currently Amended) A desiccant air cooling system, said desiccant air cooling system comprising:

an air mixing means for mixing having a first inlet for return air and a second inlet for fresh air, the air mixing means adapted to mix a return air from a structure with a fresh air to form a mixed air;

a housing partitioned into a first and second air chamber each for passing air therethrough, each said air chamber having an inlet for intake of air and an outlet for exhausting of air;

a rotating desiccant wheel positioned inside said housing and across said air chambers;

a cooling means positioned within said first air chamber downstream of said desiccant wheel;

an air transmitting means positioned within said first air chamber for drawing said mixed air from said air mixing means into said first air chamber and passing said mixed air along a first path of travel across said desiccant wheel to remove moisture from said mixed air, across said cooling means and exhausting into the structure as conditioned air;

an air transmitting means positioned within said second air chamber for drawing a source air into said second air chamber along a second path of travel, across said desiccant wheel to remove moisture from said desiccant wheel and exhausting from said second air chamber; and

an air heating means positioned in said second air chamber upstream of said desiccant wheel for heating said source air to be passed over said desiccant wheel.

11 - 28. (Canceled)